

*This homework assignment should be used as a **STUDY GUIDE**
for the Prime Time – Part 1 **UNIT TEST** this week.*

1. Find the Least Common Multiple (LCM) of 5 and 8: _____

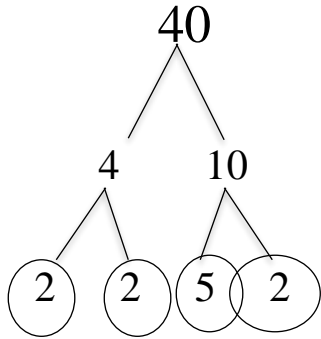
2. Find the Greatest Common Factor (GCF) of 24 and 32: _____

3. My alarm clock goes off every 9 minutes. My husband's alarm clock goes off every 6 minutes. If they both go off at the same time, how many minutes later will they both go off at the same time again?
Show work!

4. I'm making treat bags for my class. I have 72 stickers and 90 pencils to give out. If I want to use all of the stickers and pencils, with no leftovers, what is the **greatest** number of treat bags I can make?
Show work!

5. For parts a-e, use **factor trees** to write the **prime factorization** for each number below.

Ex.



Prime Factorization: $2^3 \times 5$

a.

64

Prime Factorization: _____

b.

120

Prime Factorization: _____

c.

45

Prime Factorization: _____

d.

99

Prime Factorization: _____

e.

18

Prime Factorization: _____

6. What number has the prime factorization $2 \times 3^2 \times 5$? Show how you found the number.

7. The Red Top Taxi company wants to keep its cars in good operating condition. It has a schedule for regular maintenance checks on each car.

→*Oil* is to be changed once *every 6 weeks*.

→*Brakes* are to be inspected and repaired *every 10 weeks*.

After a new cab is put in service, is there ever a week when that cab is scheduled for **both** an *oil change* **and** a *brake inspection*? If so, what is the first such time?

8. Mrs. MaryAnn is giving treat sacks out for Valentine's Day. Each sack has to have the same items in it. She has 30 pencils and 42 smiley stickers. (With no leftovers!)

a. What is the **greatest** number of treat sacks she can make? How do you know this for sure?

b. How many of each kind of treat is in one sack? Pencils = _____ Stickers = _____

9. Write each problem below out as a multiplication problem, and then find the product.

a. $8^3 = \underline{8 \times 8 \times 8} = \underline{512}$

b. $4^2 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

c. $2^5 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

d. $3^2 \times 6^2 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

e. $10^4 = \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$

10. Just for fun...

Would you rather?

be the best player on a team that always loses **OR** be the worst player on a team that always wins

be given \$1,000 right now **OR** be given \$50 a month for the rest of your life

be able to fly **OR** be able to turn invisible

a job that you hate, but pays you millions of dollars **OR** a job that you love that pays you barely anything

be able to control the weather **OR** be able to talk to animals